

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) An arrangement for controlling a multi-phased and reversible rotating electrical machine, associated with an internal combustion engine of a vehicle, including a network for supplying electrical energy and an electrical energy supply battery connected to this network, the arrangement comprising:
 - a device for supplying to the network energy produced by overexcitation of the electrical machine caused by at least braking, wherein the device for supplying the energy comprises at least one energy storage device,
 - a DC to DC device operatively connected between the energy supply battery and the energy storage device; and
 - a switching device configured to selectively connect the electrical machine to one of the energy supply battery and the energy storage device, the switching device being configured to connect the electrical machine to the energy storage device during overexcitation of the electrical machine, the switching device being further configured for enabling short-circuiting of the DC to DC device during alternator mode other than overexcitation.
2. (Previously Presented) The arrangement according to claim 1, wherein the switching device comprises a metal-oxide-semiconductor field-effect transistor (MOSFET).
3. (Previously Presented) The arrangement according to claim 2, wherein the switching device comprises a static switch.
4. (Previously Presented) The arrangement according to claim 3, wherein the energy storage device comprises a capacitor device.

5. (Previously Presented) The arrangement according to claim 4, wherein the switching device comprises two transistors, which are mounted head-to-tail in an output circuit of the rotating electrical machine.
6. (Previously Presented) The arrangement according to claim 1, wherein the switching device comprises a diode, with a switch mounted in series with the diode.
7. (Previously Presented) The arrangement according to claim 6, wherein the switching device comprises an electromagnetic relay.
8. (Previously Presented) The arrangement according to claim 1, wherein the switching device is mounted between the rotating electrical machine and the energy storage device.
9. (Previously Presented) The arrangement according to claim 4, wherein the energy storage device is a supercapacitor with low internal resistance.
10. (Previously Presented) The arrangement according to claim 5, wherein at least one of the transistors is of the metal-oxide-semiconductor field-effect transistor (MOSFET) type.
11. (New) An arrangement for controlling a multi-phased and reversible rotating electrical machine, associated with an internal combustion engine of a vehicle, including a network for supplying electrical energy and an electrical energy supply battery connected to this network, the arrangement comprising:
a device for supplying to the network energy produced by overexcitation of the electrical machine caused by at least braking, wherein the device for supplying the energy comprises at least one energy storage device,
a DC to DC device operatively connected between the energy supply battery and the energy storage device; and
a switching device configured to selectively connect the electrical machine to one of the energy supply battery and the energy storage device, the switching device being

configured to connect the electrical machine to the energy storage device during overexcitation of the electrical machine, the switching device comprising:
two transistors mounted head to tail between the electrical machine and a connection point of the DC to DC device and of the energy storage device, and
one transistor mounted between the electrical machine and a connection point of the DC to DC device and of the energy supply battery.

12. (New) An arrangement for controlling a multi-phased and reversible rotating electrical machine, associated with an internal combustion engine of a vehicle, including a network for supplying electrical energy and an electrical energy supply battery connected to this network, the arrangement comprising:

a device for supplying to the network energy produced by overexcitation of the electrical machine caused by at least braking, wherein the device for supplying the energy comprises at least one energy storage device,
a DC to DC device operatively connected between the energy supply battery and the energy storage device; and
a switching device configured to selectively connect the electrical machine to one of the energy supply battery and the energy storage device, the switching device being configured to connect the electrical machine to the energy storage device during overexcitation of the electrical machine, the switching device comprising:
a diode with a switch mounted in series between the electrical machine and a connection point of the DC to DC device and of the energy storage device, and
one transistor mounted between the electrical machine and a connection point of the DC to DC device and of the energy supply battery.

13. (New) An arrangement for controlling a multi-phased and reversible rotating electrical machine, associated with an internal combustion engine of a vehicle, including a network for supplying electrical energy and an electrical energy supply battery connected to this network, the arrangement comprising:

a device for supplying to the network energy produced by overexcitation of the electrical machine caused by at least braking, wherein the device for supplying the energy comprises at least one energy storage device,

a DC to DC device operatively connected between the energy supply battery and the energy storage device; and

a switching device configured to selectively connect the electrical machine to one of the energy supply battery and the energy storage device, the switching device being configured to connect the electrical machine to the energy storage device during overexcitation of the electrical machine, the switching device comprising a switch mounted in parallel with the DC to DC device.